

CLAIMS

548817

1. A mobile user interface device for controlling a host computer, comprising:

5 a graphical display subsystem, including a graphical display, for displaying an image;

an input subsystem, including a stylus, for receiving from a user positional data representing spatial positions of said stylus; and

10 a wireless communication subsystem for sending data to and receiving data from said host computer over a wireless communication link; and

means for controlling operations of said graphical display subsystem, said input subsystem and said wireless communication subsystem, said

15 means for controlling (i) causing said wireless communication link to be created; (ii) causing an application program to be run on said host computer; (iii) receiving from said input subsystem said positional data, providing a

20 response to said user in acknowledgment of said positional data, and transmitting over said wireless communication link said positional data to said application program; and (iv) receiving over said wireless communication link from said

25 application program data representing said image, and causing said graphical display subsystem to display said image on said graphical display.

2. A mobile user interface device as in Claim 1,

30 wherein said means for controlling comprises:

a central processing unit;

a processor bus coupled to data and address terminals of said central processing unit;

35 a memory subsystem accessible by said central processing unit over said processor bus;

a peripheral bus coupled to said input device subsystem, said graphical display subsystem and said wireless communication subsystem;

5 a system controller unit, coupled to said processor and peripheral busses and under the control of said central processing unit, for controlling over said peripheral bus the operations of said input device subsystem, said graphical subsystem, and said wireless
10 communication subsystem.

3. A mobile user interface unit as in Claim 2, further comprising a keyboard controller coupled to said peripheral bus for receiving keyboard input from
15 one of: (i) a keyboard connected to said mobile user interface; and (ii) a keyboard emulation program executed by said central processing unit, wherein said keyboard emulation program mapping said positional data received in said input subsystem to selections of keys
20 from a keyboard image displayed on said graphical display.

4. A mobile user interface device as in Claim 1, wherein said host computer interprets said positional
25 data as representing digitized strokes of a handwriting.

5. A mobile user interface device as in Claim 2, wherein said system controller unit includes a power
30 conservation circuit for temporarily suspending operation of said mobile user interface device when a predetermined time period elapses without positional data received in said input subsystem.

Sub
837

5 6. A computer system comprising:
a hand-held interface devices comprising (i)
a display device; (ii) a position input device;
(iii) a wireless receiver and transmitter circuit;
and (iv) control means for providing an image on
said display device; and

10 a host computer being coupled to (i) a
wireless receiver and transmitter circuit for
communicating with said hand held interface
device; and (ii) means for modifying said image.

15 7. A computer system as in Claim 6, wherein said
wireless receiver and transmitter circuit is accessed
by said host computer as a shared resource on a local
area network.

20 8. A computer system as in Claim 7, wherein said
position input device provides a plurality of data
points each indicating a position of said position
input device relative to an origin, said data points
being queued in a pen event buffer in said hand held
interface device for transmission to said host computer
over a wireless link established between said wireless
receiver and transmitter circuit of said hand held
25 interface device and said wireless receiver and
transmitter circuit coupled to said host computer.

30 9. A computer system as in Claim 6, wherein said
host computer provides commands over said wireless link
for displaying graphical images on said display device
of said hand held interface device.

35 10. A computer system as in Claim 8, wherein said
host computer has (i) buffer means for storing said
data points received over said wireless link; (ii)
means for processing said data points; and (iii) an

0909248-071901

event injector means for introducing said data points one by one into said means for processing.

11. A method for providing a mobile user
5 interface device, comprising the steps of:
 providing a graphical display;
 providing an input device for indicating
 locations on said graphical display; and
 providing a wireless transceiver for
10 communicating display information from said host
 computer to said mobile user interface device and
 for communicating said locations from said mobile
 user interface device to said host computer; and
 sending data representing said locations to
15 said host computer over said wireless link.

12. A method as in Claim 11, further comprising
the step of interpreting in said host computer said
locations as representing digitized strokes of a
20 handwriting.

13. A method as in Claim 12, further comprising
the step of providing a power conservation circuit for
temporarily suspending operation of said mobile user
25 interface device when a predetermined time period
elapses during which said positional and selection data
are out of a predetermined range.